

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RALPH SOMACK and
GARY LIM

Appeal 2006-2686
Application 09/994,495
Technology Center 1700

Decided: January 19, 2007

Before EDWARD C. KIMLIN, CHUNG K. PAK, and THOMAS A.
WALTZ, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the Primary Examiner's final rejection of claims 1 through 19, 48, and 49. Claims 20-47 and 51-57 are the only other claims pending in this application and stand withdrawn from

further consideration as directed to a non-elected invention (Br. 3).¹ We have jurisdiction pursuant to 35 U.S.C. § 134.

According to Appellants, the invention is directed to a system for processing a plurality of fluid samples, where the system comprises a plurality of biological sample purification devices having a tubular body with a first end, a first end opening, a second end, a second end opening, a species-immobilizing filter held within the tubular body, a removable cap to seal the second end opening, and a sealing device having a surface adapted to individually seal each of the first end openings of the plurality of devices during the processing of a plurality of fluid samples (Br. 3). The sealing device comprises a tray having a plurality of recesses (Br. 3-4). Illustrative independent claim 1 is reproduced below:

1. A system for processing a plurality of fluid samples, said system comprising:

a plurality of biological sample purification devices, each device of said plurality of devices comprising a tubular body having a first end, a first end opening, a second end, a second end opening, a species-immobilizing filter held within the tubular body, and a removable cap adapted to seal the second end opening; and

a sealing device having a surface adapted to individually seal each of the first end openings of said plurality of devices during the processing of a plurality of fluid samples, the sealing device comprising a tray and the tray comprising a plurality of recesses.

¹ We refer to and cite from the “**RESUBMISSION OF BRIEF FOR APPELLANTS**” dated Dec. 1, 2005.

The Examiner has relied upon the following references as evidence of unpatentability:

Sheer	US 5,124,041	Jun. 23, 1992
McGraw	US 5,368,823	Nov. 29, 1994
Franciskovich	US 5,603,899	Feb. 18, 1997
Sanadi	US 5,741,463	Apr. 21, 1998
Bankier	US 5,846,493	Dec. 08, 1998
Leying	US 5,955,271	Sep. 21, 1999

The following rejections are on review in this appeal:

- (1) claims 1-5, 16, and 19 stand rejected under 35 U.S.C. § 102(b) as anticipated by Franciskovich (Answer 3);
- (2) claims 1-9 and 16-19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Franciskovich in view of Sanadi (Answer 4);
- (3) claims 10, 11, and 13-15 stand rejected under § 103(a) over Franciskovich in view of Bankier (Answer 6);
- (4) claim 12 stands rejected under § 103(a) over Franciskovich in view of Bankier, Leying, and Sheer (Answer 7); and
- (5) claims 48 and 49 stand rejected under § 103(a) over McGraw in view of Sanadi (Answer 8).²

Based on the totality of the record, we AFFIRM all rejections on appeal essentially for the reasons stated in the Answer, as well as those reasons set forth below.

OPINION

A. The Rejection based on § 102(b)

Claims 1-5, 16, and 19 have been rejected by the Examiner as anticipated under § 102(b) by Franciskovich (Answer 3). Appellants only present arguments with respect to claim 1 on appeal (Br. 10-15).

Accordingly, we limit our consideration to claim 1 on appeal. *See* 37 C.F.R.

² The rejection of claims 48 and 49 under § 103(a) over Fernwood (US 5,141,719) in view of Sanadi has been withdrawn by the Examiner (Answer 3 and 8).

§ 41.37(c)(7)(2006). Appellants also state that these claims “stand or fall together” (Br. 10).

The Examiner finds that Franciskovich discloses a system (10) for processing a plurality of fluid samples that includes a plurality of sample purification devices (12), where each device (12) comprises a tubular body (50) having a first end (62), a first end opening (70), a second end (54), a second end opening (52), and a species-immobilizing filter (51, 53) held within the tubular body (50) (Answer 3-4). The Examiner further finds that the system of this reference further includes removable caps (58) for sealing the second end opening (52), and a sealing device (16) having a surface (36) adapted to individually seal each of the first end openings (70) (Answer 4). The Examiner finds that the sealing device is a tray (16) comprising a plurality of recesses (34), where the tray seals the first end openings during processing of the fluid samples, with the tray being sealed to plate (14) while holding the devices (12) during centrifugation (*id.*). In view of these findings, the Examiner states that the structure disclosed by Franciskovich anticipates the system as set forth in claim 1 on appeal, with the Examiner construing the claimed term “seal” to mean that the openings (70) are closed with respect to the exterior environment even though fluid can pass through the openings (70) and into the recesses (34) of the sealing tray (16) (Answer 9-11).

Appellants argue that Franciskovich does not teach a collector plate 16 having an upper surface 36 that seals each of the openings 70 of the plurality of devices 12 held in manifold 14, let alone a collector plate 16 having an upper surface 36 that individually seals each of the openings 70 (Br. 11). Appellants argue that the collector plate 16 having the upper

surface 36 does not meet the claimed limitation of having a “surface adapted to individually seal of [sic] each of the first end openings” (*id.*). Appellants state that the term “seal” is both implicitly and explicitly defined in the specification as meaning that a sample is sealed in a device “such that it does not evaporate or leak from the device” (*id.*). Appellants further rely on a technical reference definition of “seal” to mean “any device or system that creates a non-leaking union between two mechanical or process-system elements” (*id.*).

“Under 35 U.S.C. § 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim. *In re Bond*, 910 F.2d 831, 832, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990).” *Gechter v. Davidson*, 116 F.3d 1454, 1457, 43 USPQ2d 1030, 1032 (Fed. Cir. 1994). Implicit in our review of the Examiner’s anticipation analysis is that the claim must first have been correctly construed to define the scope and meaning of each contested limitation. *Gechter, supra*, citing *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). The Patent and Trademark Office determines the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction “in light of the specification as it would be interpreted by one of ordinary skill in the art.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005)(en banc), quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’ [Citation omitted].” *Phillips v. AWH Corp., supra*.

Accordingly, we must first properly construe the disputed term “seal.” Here we need not rely on extrinsic evidence (i.e., the technical reference system referred to by Appellants), since Appellants’ Specification implicitly defines a “sealed device” as one that “protects the sample sealed therein from evaporation, contamination, and leaking” (Specification 5:21-24). However, we note that claim 1 on appeal does not positively recite that the sealing device “seals” the first end openings but merely requires that the sealing device has a surface “adapted to individually seal” each of the first end openings. As stated by our reviewing court,³ a patent applicant is free to recite features of an apparatus either structurally or functionally. Yet, choosing to define an element functionally, i.e., by what it does, carries with it a risk. If the prior art reference describes the same apparatus, the functional recitation will not serve to distinguish the claim from this prior art. *See Schreiber, supra*. Therefore we agree with the Examiner that Franciskovich describes the same “sealing device” (collection plate 16 with recesses (34)) as disclosed and claimed by Appellants, and this collection device is *capable* of individually sealing each of the first end openings. Whether the upper surface (36) of tray (16) is “firmly held” against the lower surface (23) of the tube holder (14) of Franciskovich with sufficient force to “seal” each opening (Br. 12; Answer 9-10) is not material to the finding that the sealing device of the reference is capable of sealing the individual openings.⁴

³ *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997).

⁴ Even assuming arguendo that the claim positively required sealing, we agree with the Examiner that the collection plate of the reference “seals” the

For the foregoing reasons and those stated in the Answer, we determine that the burden has been shifted to Appellants to establish that the collection plate taught by Franciskovich is not capable of performing the claimed function. *See Schreiber, supra*. We determine that Appellants have not met this burden.

Appellants argue that Franciskovich “teaches away” from the claimed invention by suggesting that a seal is not provided between the column manifold 14 and the collector plate 16 when a centrifuge is employed to drive the sample (Br. 12). Appellants argue that col. 5, ll. 9-15, of Franciskovich clearly communicates that openings 70 are not sealed (Br. 13).

Appellants’ arguments are not persuasive. First, we note that the question of whether a reference “teaches away” from the invention is inapplicable to an anticipation analysis. *See Celeritas Techs., Ltd. v. Rockwell Int’l Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998). Second, as discussed above, a seal is not required by claim 1 on appeal but merely a sealing device that is “adapted” to individually seal the openings of the purification devices, i.e., a sealing device that is capable of sealing the openings.

For the foregoing reasons and those expressed in the Answer, we determine that the Examiner has established a prima facie case of anticipation that has not been adequately rebutted by Appellants’ evidence or arguments. Therefore we affirm the rejection of claim 1, and claims 2-5,

openings of the separation devices to the same extent that Appellants’ sealing tray (24) “seals” the openings of the tubular body 10 (Answer 11).

16, and 19 which stand or fall with claim 1, under 35 U.S.C. § 102(b) over Franciskovich.

B. The Rejections based on § 103(a)

The Examiner has rejected claims 1-9 and 16-19 under § 103(a) over Franciskovich in view of Sanadi (Answer 4). With respect to claim 1 on appeal, we have affirmed the rejection of this claim under § 102(b) over Franciskovich as discussed above. Since the epitome of obviousness under § 103(a) is lack of novelty under § 102, we also affirm the rejection of claim 1, and claims 2-7, and 16-19 which stand or fall with claim 1, for reasons discussed above. *See In re Fracalossi*, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982). Accordingly, we need not discuss Sanadi with regard to these claims.

With regard to the above rejection, Appellants only present specific, substantive arguments with respect to claims 8 and 9 (Br. 21). Appellants argue that claims 8 and 9 include an adhesive while Sanadi expressly rejects the use of adhesives because they cause cross-contamination, thus “teaching away” from the invention (*id.*).

The Examiner finds that Sanadi teaches alternative sealing devices to the caps (58) used by Franciskovich to seal the openings (52), suggesting tray (61) with recesses (73) to replace caps and thus avoid cross-contamination of the samples (Answer 5 and 12-15). With regard to claims 8 and 9, the Examiner finds that Sanadi discloses that use of an adhesive tape is well known in the art for sealing the open top of a plurality of wells (Answer 5). From this finding, the Examiner concludes that the use of any adhesive to close the open top of a well would have been well within the ordinary skill in the art (Answer 5-6).

We do not find Appellants' arguments persuasive. Although Sanadi teaches that the use of adhesive tapes could be unreliable in some situations, we determine that the teachings of Sanadi do not suggest that adhesive tapes are unlikely to produce the objective of Appellants' invention. *See In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131-32 (Fed. Cir. 1994). *See* Sanadi, col. 1, ll. 49-56, where Sanadi teaches that adhesive tapes are not "very reliable," limit the number of conditions that the plate can be subjected to, and could not easily be incorporated into automated systems. However, we determine that this teaching does not lead away from use of adhesive tapes in some conditions in non-automated systems, and thus there is no "teaching away" with respect to the objective of Appellants' invention, namely sealing the openings of a multi-well array.

With respect to the rejections employing the secondary references to Bankier, Leying, and Sheer, we note that Appellants do not contest the application of these references other than stating that these references do not cure the deficiencies of Franciskovich (Br. 22-23). Accordingly, we repeat our remarks as discussed above with regard to Franciskovich and adopt the Examiner's findings and conclusions of law with respect to the rejections involving Bankier, Leying, and Sheer (Answer 6-8).

With regard to claims 48 and 49, the Examiner finds that McGraw discloses a plate (8) having a first surface and a second surface that opposes the first surface and a plurality of through-holes (11) that define a first opening and a second opening, where the plate (8) includes a plurality of species-immobilizing filters (7) disposed in each through-hole (Answer 8). The Examiner recognizes that McGraw does not disclose the claimed first and second sealing devices "adapted" to seal the first and second end

openings, respectively (*id.*). The Examiner applies Sanadi for the teaching to avoid the problem of cross-contamination of an array of tube or multi-well plates by sealing the openings associated with the array of tubes or wells by a variety of sealing devices, such as plates, tapes, and caps (Answer 8-9). From these findings, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the sealing devices disclosed by Sanadi to seal the openings of an array device such as disclosed by McGraw to prevent contamination of the wells of the array device (Answer 9).

Appellants argue that the combination of McGraw with Sanadi is improper because there is no motivation or suggestion supporting the combination since McGraw does not suggest sealing any opening but requires that the inlet and outlet openings remain open (Br. 27). Appellants argue that Sanadi requires one closed end and one open end, and thus there would be no motivation to combine this disclosure with the teachings of McGraw (Br. 28-29). Finally, Appellants argue that assuming such a motivation does exist, the modification would render McGraw unsatisfactory for its intended purpose (Br. 29).

Appellants' arguments are not persuasive. As correctly argued by the Examiner, McGraw requires the inlet and outlet openings to remain open during processing but one of ordinary skill in this art would have readily recognized that sealing the inlet and outlet openings prior to or after processing would have prevented contamination of the device contents, as taught by Sanadi (Answer 19-20). Accordingly, the use of first and second sealing devices for the first and second end openings, respectively, would

have been prima facie obvious to one of ordinary skill in this art to prevent cross-contamination before or after processing of the samples.

For the foregoing reasons and those stated in the Answer, we determine that the Examiner has established a prima facie case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of Appellants' arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of § 103(a). Therefore we affirm all rejections on appeal based on § 103(a).

C. Summary

We have affirmed all rejections on appeal. Therefore the decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

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